

Primary Examiner Griffin:

This is in response to an outstanding Office Action in the above-identified application mailed JULY 2, 2002, with a shortened statutory period for response of three (3) months, set to expire
5 OCTOBER 2, 2002.

Assistant Commissioner for Patents is authorized to withdraw any additional moneys required for this purpose from Deposit Account No.01-0528.

Please enter the following amendments.

10

IN THE SPECIFICATION

At page 5, kindly ~~amend~~, lines 10 to 20, to read as follows:

Conventional hydrodesulfurization (HDS) catalysts can be used to remove a major portion of the sulfur from petroleum distillates
15 for the blending of refinery transportation fuels, but they are not efficient for removing sulfur from compounds where the sulfur atom is sterically hindered as in multi-ring aromatic sulfur compounds. This is especially true where the sulfur heteroatom is doubly hindered (e.g., 4,6-dimethyldibenzothiophene). Using
20 conventional hydrodesulfurization catalysts at high temperatures would cause yield loss, faster catalyst coking, and product quality deterioration (e.g., color). Using high pressure requires a large capital outlay.

At page 5, kindly ~~amend~~, lines 26 to 35, to read as follows:

The art is replete with processes said to remove sulfur from distillate feedstocks and products. One known method involves the oxidation of petroleum fractions containing at least a major amount of material boiling above a very high-boiling hydrocarbon materials (petroleum fractions containing at least a major amount
25 of material boiling above about 550° F.) followed by treating the
30

A2 effluent containing the oxidized compounds at elevated temperatures to form hydrogen sulfide (500° F. to 1350° F.) and/or hydroprocessing to reduce the sulfur content of the hydrocarbon material. See, for example, U.S. Patent Number 3,847,798 in the

5 At page 26, kindly amend, lines 14 to 23, to read as follows:

A3 10 Beneficially, all or a portion of the low-boiling fraction in substantially liquid form is diverted through conduit 32a and into an optional oxygenation process unit 110 for catalytic oxidation in the liquid phase with a gaseous source of dioxygen, such as air or oxygen enriched air. For the purpose of the present invention, the term "oxygenation" is defined as any means by which one or more atoms of oxygen is added to a hydrocarbon molecule. Particularly suitable catalytic oxygenation processes are disclosed in commonly assigned U.S. Patent Application Serial Number 09/779,283 and 15 U.S. Patent Application Serial Number 09/779,286.

IN THE CLAIMS

Kindly amend Claims 1, 9, 14, 15 and 19, to read as follows:

20 1. A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

A4 25 providing an oxidation feedstock comprising a mixture of hydrocarbons, sulfur-containing and nitrogen-containing organic compounds, which mixture has a gravity ranging from about 10° API to about 100° API and is a product of a hydrotreating process for petroleum distillate;

30 contacting the oxidation feedstock with an immiscible phase comprising at least one organic peracid or precursors of organic peracid, in a liquid reaction mixture maintained substantially free of catalytic active metals and/or active metal-containing compounds and under conditions suitable for oxidation of one or